AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1.   (currently amended) A method of assigning optical carrier frequencies to signals to be transmitted in an optical transmission network using wavelength division multiplexing, said frequencies belonging to a comb of optical frequencies, the signals received after transmission in said network and carried by a given carrier frequency having a mean error rate that depends on said given carrier frequency, and one or more transmission constraint parameters being associated with any signal to be transmitted, which method comprises:

associating N sets of optical frequencies of the comb with N respective ranges of consecutive error rate values, each of said sets comprising frequencies generating a mean error rate in the associated range;

defining a measured signal transmission constraint level that is a function of said transmission constraint parameter(s) and takes N distinct values referred to as constraint values;

associating said N constraint values in increasing order respectively with said N sets of frequencies in decreasing order of the error rate values of the associated N ranges;

assigning any signal to be transmitted a constraint value obtained by applying said measurement;

assigning said signal to be transmitted a carrier frequency belonging to one of said sets of

frequencies that is associated with a constraint value at least equal to the constraint value

assigned to said signal to be transmitted; and

outputting a signal indicating the carrier frequency assigned to the signal to be

transmitted.

2.   (original) The method claimed in claim 1 wherein one constraint parameter of a

signal is a transmission distance that said signal must travel without benefit of individual

regeneration.

3.   (original) The method claimed in claim 1 wherein one constraint parameter of a

signal is a minimum transmission data rate of said signal.

4.   (original) The method claimed in claim 1 wherein one constraint parameter of a

signal is a maximum error rate imposed on said signal as received after transmission.

5.   (original) The method claimed in claim 1 wherein said frequencies of said comb

belong to a grid of optical frequencies spectrally spaced at a regular fashion with a given

increment and are spectrally spaced in an irregular manner such that the number of frequencies

belonging to at least one of said N sets of frequencies associated with a range of higher error rate

values is less than the number of frequencies belonging to the set of frequencies associated with

the same range of error rate values obtained if the frequencies of said comb are spaced regularly

at said increment.

6.   (original) The method claimed in claim 1 wherein said measurement is obtained

by addressing a table as a function of said transmission constraint parameter(s).

7.   (original) The method claimed in claim 1 wherein said measurement is obtained

by means of an analytical function of said transmission constraint parameter(s).

8.   (original) An optical transmission network using wavelength distribution

multiplexing to transmit signals carried by respective optical carrier frequencies belonging to a

comb of optical frequencies, which network includes processor means adapted to assign optical

carrier frequencies to the signals to be transmitted by a method as claimed in any of claims 1 to 7.

9.   (new) A network management device for assigning optical carrier frequencies to

signals to be transmitted in an optical transmission network using wavelength division

multiplexing, said frequencies belonging to a comb of optical frequencies, the signals received

after transmission in said network and carried by a given carrier frequency having a mean error

rate that depends on said given carrier frequency, and one or more transmission constraint

parameters being associated with any signal to be transmitted, the device comprising:

means for associating N sets of optical frequencies of the comb with N respective ranges

of consecutive error rate values, each of said sets comprising frequencies generating a mean error

rate in the associated range;

means for defining a measured signal transmission constraint level that is a function of

said transmission constraint parameter(s) and takes N distinct values referred to as constraint

values;

means for associating said N constraint values in increasing order respectively with said

N sets of frequencies in decreasing order of the error rate values of the associated N ranges;

means for assigning any signal to be transmitted a constraint value obtained by applying

said measurement;

means for assigning said signal to be transmitted a carrier frequency belonging to one of

said sets of frequencies that is associated with a constraint value at least equal to the constraint

value assigned to said signal to be transmitted; and

means for outputting a signal indicating the carrier frequency assigned to the signal to be

transmitted.

10.   (new) The method claimed in claim 1, comprising:

receiving a request including information relating to an optical signal to be transmitted;

and

determining constraint parameters of the optical signal to be transmitted based on said

information.

11.   (new) The device claimed in claim 9, comprising:

means for receiving a request including information relating to an optical signal to be

transmitted; and

means for determining constraint parameters of the optical signal to be transmitted based

on said information.